Draft

TECHNICAL SUPPORT DOCUMENT

Air Quality Control Permit No. 36617

Arizona Proving Ground- Ford Motor Company

I. INTRODUCTION

Permit Number 36617 is a renewal for Air Quality Control Permit number 64060-93. The permit is issued to Ford Motor Company for the operation of natural gas fired equipment (boilers, water heaters, space heaters and residential size furnaces), and diesel-fired emergency generators & pumps at Arizona Proving Ground, Yucca, Arizona.

Company Information

1.	Facility Address:	Ford Motor Company Arizona Proving Ground One Proving Ground Road Yucca, AZ 86438
2.	Mailing Address:	Ford Motor Company Arizona Proving Ground P.O. Box 428 Yucca, AZ 86438

The facility is located in an attainment area for all criteria pollutants.

II. FACILITY DESCRIPTION

Arizona Proving Ground facility is located in Yucca, Arizona. The facility has six (6) natural gas-fired water heaters, thirty (30) natural gas-fired A/C/heater units, two (2) natural gas-fired air dryer systems, three (3) natural gas-fired wastewater evaporators and four (4) natural gas-fired air heating units subject to A.A.C.R18-2-724; two (2) diesel-fired emergency power generators, and two (2) diesel-fired emergency firewater pumps subject to A.A.C.R18-2-719.

The facility has a number of gasoline storage tanks (greater than 1000 gallons capacity) are subject to A.A.C.R18-2-710. The facility has one 6000 gallons gasoline tank not equipped with submerged filling arrangement. Salvage gasoline is removed from test vehicles/small portable totes using pneumatic pumps and flows via gravity to this tank. Because of gravity feed, submerged fill pipe is not economically feasible for this tank. The increase in emissions for not having submerged filling is estimated to be about 8 pounds per year. Thus, this arrangement of filling the tank is considered acceptable equivalent to a submerged filling device. In addition, the facility has a number of diesel tanks (smaller than 40000 gallons) and other activities as detailed in the list of insignificant activities.

The equipment covered under this permit can be found in Attachment “C” of the permit.

III. EMISSIONS

When operating all equipment (including the emergency equipment) for 8760 hours per year, the facility has a potential to emit (PTE) 39 tons per year of carbon monoxide (CO) and 170 tons per

year of Nitrogen Oxides (NO_x). To maintain the source's status as a synthetic minor, this facility is permitted to operate two (2) generators (268 hp and 335 hp) for a maximum of 500 hours per year, per emergency generator, based on a twelve month rolling total, and two (2) internal combustion engines for emergency fire water pumps (305 hp each) for a maximum of 500 hours per year, per pump, based on a twelve month rolling total. Natural gas-fired water heaters, A/C/heater units, air dryer systems, wastewater evaporators and air heating units are permitted to operate for 8760 hours per year. These operational limitations have been voluntarily accepted by the Permittee.

Facility wide potential to emit (PTE) for the operating hours as proposed above are given in Table 1 below:

Table 1: Facility wide potential to emit (PTE)

Pollutant	Gas fired Equipment (8760 hours) tpy	diesel generators and pumps (500 hours) tpy	Storage Tanks tpy	TOTAL tpy
CO	3.90	2.03		5.93
NO_x	5.52	9.40		14.92
SO_2	0.03	0.62		0.65
PM_{10}	0.43	0.67		1.10
VOC	0.31	0.75	5.83	6.89

IV. COMPLIANCE HISTORY

8 inspections were carried out between 1996 and 2004. No violations were reported.

V. APPLICABLE REGULATIONS

Table 2 identifies the applicable regulations for the facility.

Table 2: Verification of Applicable Regulations

Unit	Rule	Verification
Natural gas fired equipment	A.A.C. R18-2-724	This standard is applicable to all natural gas fired equipment. Subsections C and J contain emission limitations for PM and opacity.
Internal Combustion Engines	A.A.C. R18-2-719	This standard is applicable to all internal combustion engines. Subsections C, D, and F contain emission limitations for PM, Opacity and SO_2, respectively.
Gasoline Storage Tanks	A.A.C. R18-2-710	This standard is applicable to storage vessels for Petroleum liquids.

Unit	Rule	Verification
Safety Kleen Parts Washer	A.A.C. R18-2-730	This standard is applicable to unclassified sources.
Fugitive dust	Article 6	This Article is applicable to any fugitive dust source.
Mobile sources	Article 8	This Article is applicable to off-road mobile sources which either move while emitting air pollutants or are frequently moved during the course of their utilization.
Spray painting operations	A.A.C. R-18-2-727, SIP R9-3-527.C	This standard is applicable to any spray painting operation.
Demolition/renovation operations	A.A.C. R18-2-1101.A.8	This standard is applicable to any asbestos related demolition or renovation operations.

VI. MONITORING AND RECORDKEEPING REQUIREMENTS

1. Where method 9 observations are required (e.g., fugitive dust sources with detectable visible emissions), such method is defined as a 6-minute average reading consisting of 24 consecutive opacity readings taken at 15 second intervals.

2. A certified EPA Reference Method 9 observer shall conduct a survey of visible emissions emanating from the stack of the internal combustion engines once in every 500 hours of operation. If the opacity of the emissions observed appears to exceed the standard, the observer shall conduct a certified EPA Reference Method 9 observation. The Permittee shall keep records of the initial survey and any EPA Reference Method 9 observations performed. If the observation results in a Method 9 opacity reading in excess of 40%, the Permittee shall report this to ADEQ as excess emission and initiate appropriate corrective action to reduce the opacity below 40%. The Permittee shall keep a record of the corrective action performed.

3. A certified EPA Reference Method 9 observer shall conduct a monthly survey of visible emissions emanating from fugitive dust sources. If the opacity of the emissions observed appears to exceed the standard, the observer shall conduct a certified EPA Reference Method 9 observation. The Permittee shall keep records of the initial survey and any EPA Reference Method 9 observations performed. If the observation results in a Method 9 opacity reading in excess of 40%, the Permittee shall report this to ADEQ as excess emission and initiate appropriate corrective action to reduce the opacity below 40%. The Permittee shall keep a record of the corrective action performed. Should the source of the fugitive dust be determined as originating off-site, such observation shall be documented and no further action will be required.

4. This being a synthetic minor permit, the Permittee is required to maintain records of monthly operating hours and rolling 12-month total for the emergency diesel generators and diesel IC engine operated emergency fire water pumps.

5. For natural gas, the bill of lading or other supplier certification document showing the name of the fuel supplier and the heating value of the fuel will be equivalent of a fuel supplier certification.

6. For diesel fuel, the bill of lading or other supplier certification document showing the name of the fuel supplier, the typical heating value of the fuel, and the maximum sulfur content will be equivalent of a fuel supplier certification.

VII. INSIGNIFICANT ACTIVITIES

The applicant has requested the following activities to be deemed as "insignificant". According to A.A.C. R18-2-101.57, for an activity to be deemed "insignificant", there should be no applicable requirement for the activity. This was the basis used to determine if the activities in the following list qualify as an "insignificant" activity under Arizona law.

Table 3

Activity	Insignificant Yes/No	Reason and Applicable Regulation
6000 gallon salvage fuel – UST # 6	No	Gasoline storage tank – A.A.C. R18-2-710
550 gallon salvage fuel – UST # 7	Yes	Diesel/waste oil storage – A.A.C. R18-2-101.57(c)
550 gallon salvage fuel – UST # 8	Yes	Diesel/waste oil storage – A.A.C. R18-2-101.57(c)
600 gallon salvage fuel – UST # 14	Yes	Diesel/waste oil storage – A.A.C. R18-2-101.57(c)
10,000 gallon vehicle fuel – UST # 12	Yes	Diesel/waste oil storage – A.A.C. R18-2-101.57(c)
3,000 gallon vehicle fuel – UST # 13	Yes	Diesel/waste oil storage – A.A.C. R18-2-101.57(c)
600 gallons and smaller storage vessels	Yes	Diesel/waste oil/gasoline storage – A.A.C. R18-2-101.57(j)
Emergency back up diesel water pump- 12.3 hp	Yes	A.A.C. R18-2-101.57(j)
Emergency back up diesel generator- 10.7 hp	Yes	A.A.C. R18-2-101.57(j)
Safety Kleen parts washer	No	A.A.C. R-18-2-730 applicable.
Vehicle tail pipe emissions capture system	Yes	A.A.C. R18-2-101.57(j).
Landscaping, building, maintenance or janitorial activities	Yes	A.A.C. R18-2-101.57(a)
Hand held or manually operated miscellaneous equipment	Yes	A.A.C. R18-2-101.57(f)
Lab equipment for chemical and physical analysis	Yes	A.A.C. R18-2-101.57(i)
IC engines driven compressors, IC engines driven generator sets and IC engines driven water pumps used for emergency replacement or standby service	No	A.A.C. R-18-2-719 applicable.

VIII. LIST OF ABBREVIATIONS

A.A.C. ..... Arizona Administrative Code
ADEQ ..... Arizona Department of Environmental Quality
AQD ..... Air Quality Division
CO ..... Carbon Monoxide
hp ..... Horsepower
hr ..... Hour
IC ..... Internal Combustion
lb ..... Pound
m ..... Meter
NO_x ..... Nitrogen Oxide
PM ..... Particulate Matter
PM_{10} ..... Particulate Matter Nominally less than 10 Micrometers
PTE ..... Potential-to-Emit
SO_2 ..... Sulfur Dioxide
TPY ..... Tons per Year
VOC ..... Volatile Organic Compound
yr ..... Year